The respective cost of these upgraded components as well as their failure rates are factors usable in determining the upgrade warranty price for a particular system configuration.

5   IHA chip 110 further includes an I/O Controller Hub (ICH) 135 which performs numerous I/O functions. ICH 135 is coupled to a System Management Bus (SMBus) 140 which is coupled to one or more SM Bus devices 145. A secured processor (SP) 150 for securely storing authorized warranty information is one of these SM Bus devices 145 as will be described later in more detail.

10   ICH 135 is coupled to a Peripheral Component Interconnect (PCI) bus 155 and PCI slots 160. An Industry Standard Architecture (ISA) bridge 165 is coupled to PCI bus 155 to provide ISA bus compatibility if desired. A Super I/O controller 170 is coupled to ICH 135 to provide connectivity to input devices such as a keyboard

15   and mouse 175 as shown in FIG. 1.

        A firmware hub (FWH) 180 is coupled to ICH 135 to provide an interface to system BIOS 185 which is coupled to FWH 180. A local area network (LAN) controller 190 is coupled to ICH 135 to provide connectivity to networking and

20   Internet Service Provider (ISP) services. A General Purpose I/O (GPIO) bus 195 is coupled to ICH 135. Four USB ports 200 are coupled to ICH 135 as shown. USB devices such as printers, scanners, joysticks, etc. can be added to the system configuration on this bus. These USB devices can be considered part of the system configuration when determining the warranty upgrade price.

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        An integrated drive electronics (IDE) bus 205 is coupled to ICH 135 to connect IDE drives 210 to the computer system. The size of the IDE drives is upgradeable and is a factor in determining warranty upgrade price.

30   FIG. 2 is a block diagram showing a simplified computer system 100 as an example of a representative electrical device for which a warranty upgrade is desired by the user or others. Computer system 100 of FIG. 2 is similar to computer system 100 of FIG. 1 except that some components have been eliminated for clarity.

The secure processor 150 of computer system 100 is coupled to secure storage 215 in which a warranty authorization including warranty configuration information is stored after verification as described subsequently.

5   Computer system 100 is coupled via the Internet or other connective medium to a warranty processor or warranty server 300 at a remote location. Typically the warranty server resides at the computer system manufacturer, the systems integrator, the computer reseller or other warranty service provider. However, the warranty server can be located at virtually any location that makes commercial
10   sense. The function of warranty server 300 is to receive computer configuration information from a computer system 100 or other electrical device for which an upgraded warranty is requested, to determine the price of a warranty for that system based on factors including the specific configuration of that computer system, and to transmit an approved warranty configuration back to the computer system 100 for
15   verification and secure storage.

       FIG. 3 is a flowchart providing more detail regarding the steps of one embodiment of the disclosed warranty upgrade request, price determination, approval and verification process. In this particular embodiment, the upgrade
20   request is "user initiated". The warranty upgrade process commences at block 400 typically when the user (or other operator) has upgraded her computer system after purchase and desires to upgrade the computer system's warranty. As per step 405, the user then runs a warranty upgrade program on the computer for which a warranty upgrade is to be requested. This is typically initiated by selecting and
25   clicking on a particular screen icon. The computer for which a warranty upgrade is requested is also referred to as the warranty-requesting computer, namely computer system 100.

       The functions of the warranty-requesting program are now described. As per
30   step 410, the warranty upgrade program collects configuration information regarding computer system 100 and, as per step 415, reports that information as a "warranty request" to an agent program 305 on warranty server 300. The warranty upgrade program collects identifying information with respect to each significant FRU within

the particular configuration of computer system 100. For example, the upgrade program can collect the model type, revision and serial number of each FRU. This effectively forms a hardware inventory that is transmitted to warranty server 300 via communications link 315 of FIG 2. In this manner, the warranty server is informed

5   of the processor type, processor speed, system memory size with brand and model, hard disk drive model and capacity, CD ROM and DVD drives types and speeds, and other identifying FRU information regarding the particular configuration of computer system 100. A unique number identifying the particular computer 100 itself, for example a serial number, is included with this configuration information.

10   All of this configuration information, or a subset thereof, forms the warranty upgrade request that is transmitted to warranty server 300.

In one embodiment, agent 305 is a software program that evaluates the inventory information sent by computer system 100 to warranty server 300. As per

15   block 420, the agent determines a warranty price using one or more of the following factors: 1) the configuration of computer system 100, namely the specific FRU's in this particular combination of components, 2) any warranty time remaining on articles in the configuration, 3) reliability of components in the configuration, 4) the age of components in the configuration, and 5) the replacement cost of components

20   in the configuration.

The agent then sends back to the requesting computer system 100 a warranty quote, as per block 425, including a price for an upgraded warranty for a selected time period for this particular configuration. It should be appreciated that

25   each configuration with its myriad of components and corresponding factors will have a unique warranty price quote.

The user of the requesting computer system (warranty requester), or someone on her behalf, then pays the quoted warranty upgrade fee as per block

30   430. This may be done directly by the requester's computer system 100 authorizing the agent 305 on the warranty server 300 to charge an account or credit card, or may be performed through some other fulfillment entity. Once warranty server 300 is informed that the warranty quote has been paid, the agent sends a "warranty